

Agricultural Department.

CONDUCTED BY ALBERT CHAPMAN.

Hollow Horn.

The belief in a disease characterized by a hollow condition of the horns of cattle appears to be national. Not alone is the ignorant farmer, who has no idea of either the name or cause of the disease, but intelligent men, those who take agricultural papers and affect a more than ordinary knowledge of animals and their diseases, believe the horns of cattle, and inserting salt, pepper and other irritants, firmly believing that they are acting wisely and in the best interest of the animal. But far from being the cause, it is utterly absurd that the idea of hollow horns producing the symptoms alleged, so barbarous—and I mean barbarous—gastro-enteritis, and so through a large part of the catalogue of diseases. Really, if an animal loses its appetite, and his horns alternately hot and cold—symptoms which accompany every disease—these are surely sufficient causes for boring the horns, blowing salt and pepper into them, slicing the tail, and inserting another dose of salt and pepper.

Finally, he asks, "Now, will he please tell us what we call the fact of the entire decomposition of the pith of the horn is the bovine tribe?" Why, it is natural absorption, of course; but it is identical with the absorption of the pith of the frontal bones of cattle, with the absorption of the pith of the frontal bones of cattle, and the formation of the frontal sinuses—a process obviously intended by nature to lighten what would otherwise be heavy and cumbersome parts. [D. E. Salmon, and C. V. M., in Country Gent.]

A California Farm.

A correspondent of the Boston Journal gives the following account of one of the famous farms of California. It is another proof of the often demonstrated fact that agriculture pays better than mining. The offspring of ignorance and quackery will gradually give place to more intelligent ideas and more human practices.

"But let us examine the development of the horn as well as its anatomical character, and see if we cannot answer some of the questions on the facts and proofs, will make this a subject of careful study and thus, I am satisfied, this offspring of ignorance and quackery will gradually give place to more intelligent ideas and more human practices."

The great Glenn Farm is probably the largest when growing farm in the United States. It belongs to Dr. Hugh Glenn, and numbers 33,000 acres. It is in Coloma, and lies on the south bank of the Sacramento river, and has a frontage of some thirty miles.

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guish a slight elevation caused by a thickening of the epidermis at the points where the horns are to grow, and having an external appearance similar to what we see in the skin from the bone beneath, we find it at this point somewhat more adherent than elsewhere, but the bone, which is now cartilaginous, presents no appear-

ance of the future bony projection. At birth, the thickening of the epidermis has increased and a bony nucleus has formed beneath it; but although this thickening is still greater, the bone is more adherent than it is yet movable, and is the bony support which has commenced to form, but is not yet ossified.

As the animal increases in age, this bony process lengthens by additions deposited by the periosteum which covers it; the skin over this is of course pressed upward, its surface increasing at the expense of its thickening, and the epidermis becomes thin and horny. Only a few weeks after birth a cavity begins to form in the bony skin of the horn. This cavity is lined by a delicate mucous membrane, an extension of that lining the frontal sinus, and continually increases in size by absorption of the bone surrounding it. The formation of this cavity is exactly similar to the formation of the frontal sinus, and is a natural process of the body being a pathological process, we have every reason for believing it to be perfectly natural, and in accordance with the laws which govern the development of the animal. So with all cattle that have horns we find this cavity, small at first, but increasing in size with the growth of the horn and age of the animal, till in old age the bony part is covered with skin, and the cavity occupies the whole of the horn.

This then gives us a very definite idea of the manner in which the horns develop, and of the tissues which compose them.

Commencing externally, we have the horny tissue, a modified form of epidermis, just as fingers, nails or hoofs are modified epidermis, all of which are secreted (formed) by the epidermis, and the skin is covered with the horny tissue or the vascular layer (true skin) which secretes it. There is the periosteum which secretes the bone, then the bone itself, and its inner nutrient membrane which lines the cavity of the horn. There are, then, between the enveloping horny tissue and the cavity, five layers of tissue, all of which are abundantly supplied with nerves, and are mainly composed of which are sensitive to an extreme degree.

Imagine then, if you can, the terrible suffering that forcing a gimmer through such tissues must cause, especially if their sensitiveness is already increased by congestion of the lining membrane; or if you cannot imagine it you can realize it by boring through your finger nail continuing through the skin, muscle, tendon, bone, and periosteum covering both sides of it, and finally stopping when the point of the instrument has pierced the skin on the opposite side. I say you can realize it, and I assure you, speaking from a knowledge of the tissues involved in each case, that you would suffer no more pain than would the unfortunate that becomes the victim of this terrible torment.

Large Growth of Corn.

The St. Johnsbury Caledonian prints the following: "Last summer Hiram Russel, of this town, planted a piece of land to common corn, expecting to cut it up and use it for fodder. The rows were put about two and half by two feet, when he hoed it, he did not think it at all bad, for it grew thick. When the same fall came round again, he found so much sound corn that he thought he would harvest it instead of using it for fodder corn. He began husking, and kept on husking until he measured out seventy bushel baskets full of sound corn. He then had the land measured, and found there was only twenty acres of good land, one has raised over two hundred and eighty bushels of sound corn to the acre, to him speak. The land was rich.

Does not this indicate that the average farmer thus has too much, or plants too far apart?" asks the Caledonian.

We say, not necessarily. It may indicate that the average farmer does not plant enough manure. It may also indicate that he doesn't plant the right kind of seed, or till properly or sufficiently. Thick planting alone will not insure a large crop.

WIDE AWAKE FOR 1878.

The popular estimation of WIDE AWAKE is well summed up in what a distinguished literary man has written: "It is a very readable, fresh and clean, while WIDE AWAKE is rare to tattered. That WIDE AWAKE will continue to be popular is beyond question."

It is a general maxim, however, that you will pay more for books that are good than for books that are bad.

And now that we are familiar with the growth and natural condition of the horn, we will turn our attention to the points raised by Mr. Prentiss. First: Is there no disease that causes the animal's horns to become hot at the base, and the cavity to fill—first with bloody serum, and later with pus? No veterinarian has ever told me that I know of; but what do I depend on? I have seen a great deal of it—it is very emphatic, is that the cavity in the horn is a disease of itself, or that the boring and salting operation can possibly be expected from the operation?

The cavity of the horn, I suppose, meets with the frontal sinus beneath it, and, consequently, all the secretions of the membrane lining the former must gravitate into the latter cavity. How can any sensible man expect this to be evacuated by a little gimlet hole half way up the horn? So far from such a result, however, the interaction of air and other irritants increases the congestion of the lining membrane, and also the quantity of its secretions. But Mr. Prentiss asserts "unless in such cases the horn is bored, this decayed matter must be taken up by the absorptions, as there is no other outlet in the frontal sinus of the genus *bos*—a very fair illustration of the accuracy of that statement, in my regard to this subject. If he will consider any good symptom of domestic cattle, he will easily find this direction. Indeed, one of the symptoms of inflammation of the lining membrane of the sinuses and horns is the peculiar discharge from the nose, which finds its way out through the opening of which he denies the existence. But this inflammation is quite rare; and I know, from personal observation, that it does not exist in more than one-half of the cases pronounced hollow horn."

Now, what are the symptoms of the so-called hollow horn? Mr. Prentiss tells us exactly when he says "all the symptoms, fever, loss of appetite, &c., were present"—general symptoms, ex-

cept the skull of the ox, he will find that these sinuses do communicate quite freely with the nasal cavities, and that an accumulation of this character, unless very abundant, can find its way out this direction. Indeed, one of

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FRANCIS BROWN, Treasurer.

EDGAR J. OLSTEAD.

East Middlebury, June 8, 1877.

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MERCHANTS TOBACCO COMPANY, BOSTON,

MAKE THE BEST, SOFT OR STIFF, ONE DOLLAR,

THREE DOLLARS IN THE CIGARETTE, AND FIVE

DOLLARS IN ONE OF THE CIGARS, IN EACH CASE,

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ASK FOR THEM, AND GET THE BEST CHEA OR SMOKE THAT CAN BE HAD.

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RED DRAGON TEA!

A perfect Tea that pleases every one.

Drinker, carefully selected from the most desirable choicest, and therefore pays better than all others.

It is sold in boxes, and every box contains

the peculiar qualities of each, and commands

such a price as to produce, at a moderate

price, one of the strongest, finest flavored

and most delicious Teas in the world.

Dealers always

ask for it.

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